

DoD Space Planning Criteria for Health Facilities

Cardiology/Pulmonary Services

3.16.1. PURPOSE AND SCOPE:

This section sets forth space planning criteria for the Cardiology/Pulmonary Services in military health care facilities. These services are typically for inpatients and outpatients.

3.16.2. DEFINITIONS:

Cardiology: The study of the heart and its functions.

Pulmonology: The science concerned with the anatomy, physiology, and the pathology of the lungs.

Provider: A “provider” in a cardiology/pulmonary service is an individual, who examines, diagnoses, treats, prescribes medication and manages the care of patients within their scope of practice as established by the governing body of a healthcare organization. Providers are pulmonologists, cardiologists, respiratory therapists, physicians, physician's assistants and clinical nurse practitioners.

Rotating Resident: A rotating resident is one from any graduate medical education specialty program (internal medicine, pediatrics, surgery, family practice, etc.) who, in the course of his or her education, must spend time in the services of another specialty. For example internal medicine residents are required to “do a rotation” in the cardiology/pulmonary service.

3.16.3. POLICIES:

Clinic Composition: A separate cardiology/pulmonary clinic will not be programmed if the number of provider FTEs is 2 or less. When staffing does not support a separate clinic, the service may be combined with internal medicine. Cardiology and pulmonary clinics may be separate clinics at larger facilities.

Providers’ Examination Rooms: Each provider will be provided with two examination rooms.

Providers’ Offices: Each provider on the staff, who has patient appointments, will be provided a private office.

Residents’ Office Space: Private office space will not be programmed for graduate medical education residents. Residents who are in a graduate medical education program studying to become a specialist in the service being programmed, will be provided with shared office space of 60 nsf per resident in the program. An office for a rotating resident may be programmed in the clinic for residents who see patients.

Resident’s Office/Examination Rooms: Additional office and examination room space may be programmed into a clinic to provide space for “rotating residents” to see patients. A resident during his or her rotation in the clinic will use this space when they see patients as walk-ins or on appointment. One office and two examination rooms may be programmed for each resident FTE projected to be in the clinic seeing patients. Note: these resident are not necessarily cardiologist residents only, family practice and internist may require a rotation in the orthopedic clinic.

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3.16.4. PROGRAM DATA REQUIRED:

Cardiology:

Number of cardiologist FTEs projected?
 Maximum number of FTE residents seeing patients in the clinic at one time?
 Number of nurses FTEs projected?
 Is there a cardiology residency program?
 Is there a Residency Research Technician assigned?
 What is the maximum number of “rotating residents” that will be working in the clinic at any one time?
 Number of FTE cardiologist(s) programmed.
 Is a Stress Echo. room required?
 Is a Transesophageal Echo. Room required?
 Is an Ultrasound Room required?
 Is there a treadmill room?
 Is there a treadmill room?
 Is a Cardiac Cath. Lab authorized?
 Is a Pacemaker Room required?
 What type of Cardiac Cath. ADP computer equipment is required?
 Average number of outpatient EKG tests per week.

Pulmonology:

Number of pulmonologist FTEs projected?
 Number of respiratory therapist FTEs projected?
 Maximum number of FTE residents seeing patients in the clinic at one time?
 Number of nurses FTEs projected?
 Is there a pulmonary residency program?
 Is there a Residency Research Technician assigned?
 What is the maximum number of “rotating residents” that will be working in the clinic at any one time?
 Is an Blood Gas Analysis trained technician programmed?
 Average number of Inhalation treatments per week?
 Is there a Pulmonary Function Lab?
 Is there a Sleep Studies Room?
 Is there a Home Care Coordinator?
 Is a bronchoscopy procedure performed in this clinic or in the OR?

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3.16.5 SPACE CRITERIA:

Toilets, Lounges and Locker Areas: The criteria for toilets, lounges and locker rooms is provided in a separate section, Section 6.

Administrative Offices: The office space required to provide administrative support to operate the clinic services will be provided in accordance with criteria for administration in Section 2.1.

FUNCTION	AUTHORIZED		PLANNING RANGE/COMMENTS
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PATIENT AREAS			
Clinic Waiting Area		Varies	Provide 5 seats per provider for the maximum number of providers projected to be working in the clinic at one time, 16 nsf for 60% of the seats and 25 nsf for 40% of the seats (handicapped waiting).
Reception/Control Counter	13.01	140	Minimum. 140 nsf per every 8 providers.
Provider’s Exam Rooms	11.15	120	Two per provider (FTE) programmed.
Patient Education Room	20.90	225	One per clinic.
Patient Toilet		varies	See Section 6.1.
STAFF AND SUPPORT AREAS			
Administrative Office		varies	Refer to Chapter 2.1. Provide if full time administrative support programmed.
Provider’s Office	11.15	120	One per provider (FTE) programmed.
Respiratory Technician Work Room	5.57	60	Minimum. 60 nsf per each technician.
Nurse Manager’s Office	11.15	120	One per clinic per programmed FTE.
NCOIC/LCPO/LPO Office	11.15	120	One per clinic.
Clinic Conference / Classroom	23.23	250	One per clinic. Provide one each, if Cardiology and Pulmonology are two separate clinics.
Staff Lounge		varies	See Section 6.1.
Staff Lockers		varies	See Section 6.1.
Clean Utility Room	11.15	120	One per clinic.
Soiled Utility Room	8.36	90	One per clinic.
Nurses’ Workroom	11.15	120	Minimum. Add 40 nsf for each nurse above 4 assigned to clinic.
Litter and Wheelchair Storage	5.57	60	One per clinic.
Janitor’s Closet	5.57	60	One janitor’s closet per 10,000 nsf. See Section 6.1.

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<u>CARDIOLOGY CLINIC</u>			Cardiology and pulmonary clinics may be separate clinics at larger facilities. Must have a minimum of two cardiologist FTE projected.
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PATIENT AREAS			
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Screening, Weights and Measures	7.43	80	One per each 4 providers.
Patient Education Room	11.15	120	One per clinic.
Outpatient Electrocardiogram (EKG) Testing	11.15	120	Minimum. Total number of rooms may be more. See formula in Section 3.16.6.
Stress Echocardiograph Room	26.94	290	1 per Cardiology clinic, if required.
Echocardiograph Room	13.01	140	One room per every 1000 echoes performed annually.
Echocardiograph Reading Room, 2 station	11.15	120	One room per every two echocardiograph rooms.
Transesophageal Echo. Room	20.44	220	One per clinic if transesophageal echo. procedures performed. May collocate with Cardiac Cath. Area.
Observation Area	5.57	60	One per transesophageal echo. room.
Recovery Area	11.15	120	One per transesophageal echo. room.
Ultrasound Room	15.33	165	One, if part of the concept of operation and if qualified technician or qualified physician (FTE) programmed.
Tilt Table Testing Room	11.15	120	1 per clinic.
Pacemaker, ICD Interrogation Room	11.15	120	1 per clinic.
Outpatient Treadmill Room	20.53	220	Minimum of one per Cardiology clinic when cardiologist is programmed. Provide second room when more than 1000 echoes performed annually.
Holter Monitor Room	11.15	120	1 per Cardiology clinic when cardiologist is programmed.
Holter Monitor Equipment Room	9.29	100	1 per Holter Monitor Room.

STAFF AND SUPPORT AREAS			
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Case Manager Office	11.15	120	One per manager (FTE) programmed.
Records Storage Room	9.29	100	One per clinic. Provide an additional 40 nsf if records are not maintained on CD or video format.
EKG Work Area and Records	11.15	120	Minimum. One per clinic, add 10 NSF for each EKG room in excess of one.
Scope Cleaning Work Room	9.29	100	One per transesophageal echo. room.
Pacemaker Equipment Storage	5.57	60	1 per pacemaker room.
Equipment Storage	11.15	120	1 per clinic.
Litter and Wheelchair Storage	5.57	60	One per clinic.

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CARDIOLOGY CLINIC (continued):

<u>CARDIAC CATHETERIZATION (CATH.) LAB</u>	Must have a minimum of one cardiologist FTE projected.		
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PATIENT AREAS			
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Cardiac Cath. Exposure Room	54.72	590	Two rooms when any cardiologist FTE projected.
Cardiac Cath. Control Room	14.30	150	One per exposure room.
Scrub Area	7.43	80	One per exposure room.
Cardiac Cath. ADP Equipment Room	12.54	135	Minimum of one, 1 per every 2 exposure rooms.
Recovery Room	22.30	240	240 minimum(2 beds) Add 120 for each additional cath. exposure room.
Recovery Room Toilet	5.57	60	One per recovery room.
Dedicated Janitor's Closet	5.57	60	One per cath. lab.
Recovery Control Station	5.57	60	One per recovery room.

STAFF AND SUPPORT AREAS			
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Physicians' Workroom	11.15	120	1 per Cardiac Cath. Lab.
Staff Locker Room:			Required due to sterile requirements.
Male:	9.29	100	One per Cath. Lab. See Section 6.1.
Female:	9.29	100	One per Cath. Lab. See Section 6.1.
Film Viewing Room	18.58	200	One per exposure room, 1 room.
Film Storage	9.29	100	One per exposure room, 1 room.
Equipment Prep Room	9.29	100	One per 2 exposure rooms.
Equipment Cleanup / Soiled Utility Room	7.43	80	Minimum one, 1 per two exposure room.
Instrument Room	9.29	100	One per 2 exposure rooms.
Sterile Supply / Clean Work Room	9.29	100	One per cath. lab.

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<u>PULMONARY CLINIC</u>	Cardiology and pulmonary clinics may be separate clinics at larger facilities. Must have a minimum of one pulmonologist FTE projected. Provide with respiratory therapist FTEs projected.
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FUNCTION	AUTHORIZED		PLANNING RANGE/COMMENTS
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PULMONARY FUNCTIONS			
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Outpatient Respiration Therapy (Inhalation Cubicles)	13.94	150	Minimum: will accommodate up to two cubicles. See formula in Section 3.16.6. below.
Home Care Coordinator Office	11.15	120	One per respiratory treatment service
Equipment Prep. Cleaning Area	13.94	150	Minimum; plus 10 nsf per treatment cubicle. Maximum: 200. 1 per clinic.
Equip. Storage & Maintenance Area	13.94	150	Minimum; plus 10 nsf per treatment. Cubicle. 1 per clinic.
Gas Cylinder Storage	2.79	30	One per clinic.
Ventilator Storage	9.29	100	Minimum or 10 nsf per ventilator.

PULMONARY FUNCTION LAB			
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Outpatient Pulm. Function Analyzer	11.15	120	One per lab.
Flow Volume Loop	9.29	100	One per lab.
Automated Pulmonary Function	9.29	100	One per lab.
Pulmonary Function Analyzer Room	11.15	120	One per lab. Includes a Body Box.
Blood Gas Analysis Room	9.29	100	One per pulmonary function lab, if a qualified Blood Gas Anal. Lab tech. FTE programmed.
Treadmill Room	23.23	250	One per pulmonary function lab.
Pulmonary Lab. Equipment Storage	9.29	100	Per cubicle. 1 per respiratory treatment area.
Spirometry Studies	9.29	100	one per pulmonary functions lab.

SLEEP STUDIES SUITE			Verify if required.
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Sleep Studies Room	9.29	100	One per pulmonary function lab.
Sleep Studies Monitoring Room	11.15	120	For equipment. One per sleep studies room.
Dedicated patient toilet		varies	One per sleep studies room. See Section 6.1.

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PULMONARY CLINIC (Cont'd)

FUNCTION	AUTHORIZED		PLANNING RANGE/COMMENTS
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BRONCHOSCOPY SUITE			Verify if procedures performed in OR. Do not locate in both areas.
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Bronchoscopy Procedures Room	13.94	150	One per clinic, when pulm. FTE projected.
Recovery Room	11.15	120	One per clinic.
Dedicated Patient Toilet	5.57	60	One per recovery room. See Section 6.1.
Control/Observation Area	5.57	60	One per recovery room.
Scope Wash Room	9.29	100	One per bronchoscopy suite.

TREATMENT AREAS

Toilet with Shower	7.43	80	1 per treadmill room and 1 per stress echo. room.
Dressing Cubicle	4.65	50	Minimum per cubicle. One cubicle per Phonocardio, one per Echocardiography Room, 1 per Treadmill room.

Functions which are required for Residency Education in Cardio/Pulmonary:

The following areas must be programmed if there is a Cardiology or Pulmonary Residency Program. These areas are in addition to those listed under common areas above.

Director of Residency	11.15	120	One per director of a Cardio/Pulmonary Residency Program.
Secretary to Director with visitor waiting.	11.15	120	One per Director of a Cardio/Pulmonary Residency Program, if there is a projected FTE secretary position.
Residency Research Technician	11.15	120	One per program, when there is a programmed FTE position.
Coordinator	11.15	120	One per Cardio/Pulmonary Program Coordinator if there is a projected FTE.
Resident's Office Space	11.15	120	Minimum, 60 nsf per projected resident.
Residency Library	22.29	240	One per Cardio/Pulmonary Residency Program.
Conference Room	37.16	400	One per Cardio/Pulmonary Residency Program.
Resident's Exam Room	11.15	120	Two examination rooms for each of the maximum of residents (all types) at any one time, who see patients in the clinic.

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3.16.6. FORMULAS:

EKG Room Requirements:

EKG Rooms = $\frac{\text{EKG tests/week}}{2 \text{ tests per hour} \times 35 \text{ hours per week}}$

Inhalation Cubicle Requirements:

Cubicles = $\frac{\text{Treatments per week}}{2 \text{ treatments per hour} \times 35 \text{ hour per week}}$